

# Package ‘ARIMAANN’

May 6, 2026

**Type** Package

**Title** Time Series Forecasting using ARIMA-ANN Hybrid Model

**Version** 0.1.0

**Depends** R (>= 2.3.1), stats,forecast, tseries

**Description**

Testing, Implementation, and Forecasting of the ARIMA-ANN hybrid model. The ARIMA-ANN hybrid model combines the distinct strengths of the Auto-Regressive Integrated Moving Average (ARIMA) model and the Artificial Neural Network (ANN) model for time series forecasting. For method details see Zhang, GP (2003) <[doi:10.1016/S0925-2312\(01\)00702-0](https://doi.org/10.1016/S0925-2312(01)00702-0)>.

**Encoding** UTF-8

**License** GPL-3

**NeedsCompilation** no

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**Repository** CRAN

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ARIMAANN	<i>ARIMA-ANN hybrid model fitting</i>
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**Description**

The ARIMAANN function fit ARIMA-ANN hybrid model for time series data.

**Usage**

```
ARIMAANN(data, h)
```

**Arguments**

data	Input univariate time series (ts) data.
h	The forecast horizon.

**Details**

This package allows you to fit the ARIMA-ANN hybrid model.

**Value**

Test_Result	Checking the suitability of data for hybrid modelling
ARIMA coefficients	Coefficients of the fitted ARIMA
pvalues	pvalues of the fitted ARIMA model
ANN Summary	Summary of the fitted ANN model on residuals obtained from the fitted ARIMA model
MAPE	Mean Absolute Percentage Error (MAPE) of the fitted hybrid model
MSE	Mean Square Error (MSE) of fitted hybrid model
fitted	Fitted values of hybrid model
forecasted.values	h step ahead forecasted values employing hybrid model

**Author(s)**

Ramasubramanian V., Mrinmoy Ray

**References**

Zhang, G. P. Time series forecasting using a hybrid ARIMA and neural network model *Neurocomputing*, 50 (2003), pp. 159-175.

**See Also**

auto.arima, nnetar

**Examples**

```
data=lynx  
ARIMAANN(data, 5)
```

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\* **ARIMA-ANN**  
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